

Claims

1. A method for controlling power consumption in a wireless short-range communication terminal having at least two different power states, the method comprising the steps of:

- receiving beacon frames at beacon intervals;
- extracting beacon interval information from a beacon frame;
- monitoring the data traffic of the terminal;
- defining at least one parameter describing the data traffic; and
- based on said at least one parameter and the beacon interval

information, dynamically controlling the power state of the terminal so that the terminal is maintained in one of at least two power states, wherein a first power state is an active state and a second power state is a power save state.

2. A method according to claim 1, wherein the monitoring step includes monitoring packet sizes and packet intervals of the data traffic.

3. A method according to claim 2, wherein said at least one parameter describes packet sizes and packet intervals.

4. A method according to claim 1, wherein the controlling step includes determining a sleep interval defining the time periods when the power save state is possible.

5. A method according to claim 4, wherein the determining step includes determining parameters indicating the timing, length and frequency of the sleep interval.

6. A method according to claim 1, further comprising the step of supplying additional input data including at least one requirement parameter describing requirements set by an application, active in the terminal, for the controlling step.

7. A method according to claim 6, wherein said at least one requirement parameter indicates the maximum period that the terminal may continuously be in the power save state.

8. A method according to claim 6, wherein said at least one requirement parameter indicates the Quality of Service (QoS) level required by the application.

9. A method according to claim 8, further comprising the step of

mapping the Quality of Service level to input parameters for the controlling step.

10. A wireless terminal for a wireless communication short-range communication system, the wireless terminal comprising:

- means for receiving beacon frames at beacon intervals;
- means for extracting beacon interval information from a beacon frame;
- traffic monitoring means for monitoring data traffic of the terminal and for defining at least one parameter describing the data traffic; and
- power management means for dynamically controlling the power state of the terminal based on said at least one parameter and said beacon interval information, thereby to maintain the terminal in one of at least two power states, wherein a first power state is an active state and a second power state is a power save state.

11. A wireless terminal according to claim **10**, wherein the traffic monitoring means include a packet analyzer adapted to analyze packet sizes and packet intervals.

12. A wireless terminal according to claim **10**, wherein the power management means comprise an interface for applications residing in the terminal, thereby to receive additional input data from an application, the additional input data including at least one requirement parameter describing requirements set by the application for the power management means.

13. A wireless terminal according to claim **10**, wherein the terminal is a WLAN terminal.

14. A short-range wireless communication system comprising:

- at least one system entity configured to broadcast beacon frames at beacon intervals;
- at least one wireless terminal configured to extract beacon interval information from a beacon frame,

wherein said at least one wireless terminal is provided with (1) traffic monitoring means for monitoring data traffic of said at least one wireless terminal and for defining at least one parameter describing the data traffic, and (2) power management means for dynamically controlling the power state of said at least one wireless terminal based on said at least one parameter and said beacon interval information, thereby to maintain said at least one wireless

terminal in one of at least two power states, wherein a first power state is an active state and a second power state is a power save state.

15. A short-range wireless communication system according to claim 14, wherein said at least system entity is a wireless terminal.

16. A short-range wireless communication system according to claim 14, wherein said at least system entity is an access point connected to a wired network.

17. A short-range wireless communication system according to claim 14, wherein the traffic monitoring means include a packet analyzer adapted to analyze packet sizes and packet intervals.